

WHAT IS CLAIMED IS:

1. A fence assembly for use on the upper surface of a saw for supporting a workpiece relative to the saw blade of the saw, said fence assembly comprising:

a fence channel having a first end and a second end;

a head assembly operatively connected to said fence channel proximate the first end of said fence channel, said head assembly including a handle cam;

a locking pawl proximate the second end of said fence assembly;

means for operatively connecting said handle cam to said locking pawl such that, when handle cam is rotated, said locking pawl is engaged to secure said fence assembly in a stationary position.

2. The fence assembly of claim 1 further comprising at least one annular ball bearing to rotatably receive and operatively mount said handle cam to said fence channel.

3. The fence assembly of claim 1 wherein said handle cam is of a single piece construction.

4. The fence assembly of claim 3 wherein said handle cam is constructed out of injection-molded plastic.

5. A saw having a fence assembly for supporting a workpiece relative to the saw blade of the saw, said fence assembly comprising:

a fence channel having a first end and a second end;

1 a head assembly operatively connected to said fence channel; and

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3 means for engaging and locking said fence assembly in a stationary position.

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5 6. The saw of claim 5 wherein said means for engaging and locking said fence  
6 assembly in a stationary position comprises a handle cam operatively connected to a  
7 locking pawl by a rod fence lock.

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9 7. The saw of claim 6 wherein said handle cam is received and rotatably mounted to  
10 said fence channel by at least one annular ball bearing.

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12 8. A fence assembly for use on the upper surface of a saw for supporting a  
13 workpiece relative to the saw blade of the saw, said fence assembly comprising:

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15 a fence channel having a first end and a second end, said fence channel including  
16 a socket disposed proximate said first end;

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18 a head assembly operatively connected to said fence channel, said head assembly  
19 includes a head and a pin extending upwardly from said head, said pin is  
20 pivotly disposed in said socket; and

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22 means for engaging and locking said fence assembly in a stationary position.

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24 9. The fence assembly of claim 8 wherein said means for engaging and locking said  
25 fence assembly in a stationary position comprises a handle cam operatively connected to  
26 a locking pawl by a rod fence lock.

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28 10. The fence assembly of claim 9 wherein said handle cam is received and rotatably  
29 mounted to said fence channel by at least one annular ball bearing.

1 11. The fence assembly of claim 8 wherein said pin absorbs a shear loading of said  
2 fence channel against said socket when said fence channel is in a locked position.

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4 12. A fence assembly for use on the upper surface of a saw for supporting a  
5 workpiece relative to the saw blade of the saw, said fence assembly comprising:

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7 a fence channel having a first end and a second end, said fence channel including  
8 a downwardly extending pin;

9  
10 a head assembly operatively connected to said fence channel, said head assembly  
11 including a head having a socket disposed therein, said socket receives  
12 said pin for pivotal rotation; and

13  
14 means for engaging and locking said fence assembly in a stationary position.

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16 13. The fence assembly of claim 12 wherein said means for engaging and locking said  
17 fence assembly in a stationary position comprises a handle cam operatively connected to  
18 a locking pawl by a rod fence lock.

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20 14. The fence assembly of claim 13 wherein said handle cam is received and rotatably  
21 mounted to said fence channel by at least one annular bearing.

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23 15. The fence assembly of claim 12 wherein said pin absorbs a shear loading of said  
24 fence channel against said socket when said fence channel is in a locked position.

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26 16. A fence assembly for use on the upper surface of a saw for supporting a  
27 workpiece relative to the saw blade of the saw, and wherein said saw has a front rail with  
28 a curved profile portion extending parallel to the length of said front rail, said fence  
29 assembly comprising:  
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a fence channel having a first end and a second end;

a head assembly operatively connected to said fence channel, said head assembly including a head having an upper surface and a lower surface, said lower surface of said head having a groove with a radius substantially matching the radius of said curved profile portion of said front rail; and

means for engaging and locking said fence assembly in a stationary position.

17. The fence assembly of claim 16 wherein said fence assembly can be upwardly removed from upper surface of said saw at any location along said front rail.

18. The fence assembly of claim 16 wherein said means for engaging and locking said fence assembly in a stationary position comprises a handle cam operatively connected to a locking pawl by a rod fence lock.

19. The fence assembly of claim 18 wherein said handle cam is received and rotatably mounted to said fence channel by at least one annular bearing.

20. A fence assembly for use on the upper surface of a saw for supporting a workpiece relative to the saw blade of the saw, and wherein said saw has a front rail extending parallel to the front side of said upper surface of said saw, said fence assembly comprising:

a fence channel having a first end and a second end;

a head assembly operatively connected to said fence channel, said head assembly including a means for substantially self-aligning said fence assembly parallel to said saw blade; and

means for engaging and locking said fence assembly in a stationary position.

21. The fence assembly of claim 20 wherein said fence assembly can be upwardly removed from upper surface of said saw at any location along said front rail.

22. The fence assembly of claim 20 wherein said front rail includes a curved profile portion extending parallel to the length of said front rail and said head assembly includes a lower surface having a groove with a radius substantially matching the radius of said curved profile portion of said front rail.

23. The fence assembly of claim 20 wherein said means for engaging and locking said fence assembly in a stationary position comprises a handle cam operatively connected to a locking pawl by a rod fence lock.

24. A fence assembly for use on the upper surface of a saw for supporting a workpiece relative to the saw blade of the saw, and wherein said saw has a front rail extending parallel to the front of said upper surface of said saw, said fence assembly comprising:

a fence channel having a first end and a second end;

a head assembly operatively connected to said fence channel, said head assembly having a microadjust assembly for fine adjustment of said fence assembly, said microadjust assembly including a knob handle operatively connected to a bumper, said bumper engages said front rail and moves said fence assembly in response to rotation of said knob handle; and

means for engaging and locking said fence assembly in a stationary position.

25. The fence assembly of claim 24 wherein the bumper of said microadjust assembly is made out of an elastomeric material.

26. The fence assembly of claim 24 wherein the microadjust assembly further comprises a spring to disengage said bumper from said front rail when not in use.

27. A fence assembly for use on the upper surface of a saw for supporting a workpiece relative to the saw blade of the saw, and wherein said saw has a front rail extending parallel to the front of said upper surface of said saw, said fence assembly comprising:

a fence channel having a first end and a second end;

a head assembly operatively connected to said fence channel, said head assembly having a means for fine adjusting the distance between said saw blade and said fence channel; and

means for engaging and locking said fence assembly in a stationary position.

28. The fence assembly of claim 27 wherein said means for fine adjusting the distance between said saw blade and said fence channel includes a knob handle connected to a bumper, and further including a spring to disengage said bumper from said front rail when not in use.

29. The fence assembly of claim 27 wherein said means for engaging and locking said fence assembly in a stationary position comprises a handle cam operatively connected to a locking pawl by a rod fence lock.

30. A fence assembly for use on the upper surface of a saw for supporting a workpiece relative to the saw blade of the saw, and wherein said saw has a front rail

1 extending parallel to the front side of said upper surface of said saw, and a rear rail  
2 extending parallel to the back side of said upper surface of said saw, said fence assembly  
3 comprising:

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5 a fence channel having a first end and a second end; and

6  
7 a head assembly for engaging and locking said fence assembly in a stationary  
8 position, said locking pawl is slidably engaged with said rear rail of said  
9 saw.

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11 31. The fence assembly of claim 30 wherein said locking pawl is of a single piece  
12 construction allowing it to both slide and lock against said rear rail.

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14 32. A fence assembly for use on the upper surface of a saw for supporting a  
15 workpiece relative to the saw blade of the saw, said fence assembly comprising:

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17 a fence channel having a first end and a second end;

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19 means for engaging and locking said fence assembly in a stationary position;

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21 a front rail and rear rail wherein said rails are parallel to the front and back sides  
22 of said upper surface of said saw, respectively; and

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24 a locking pawl slidably engaged with said rear rail and having a single-piece  
25 construction.

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27 33. A miter gauge assembly for use on a saw, said miter gauge assembly used for the  
28 mitering of a workpiece by a saw blade of the saw, said miter gauge assembly  
29 comprising:  
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1 a gauge pivotally connected to a rod;

2  
3 a knob adjustment assembly to secure said gauge at a fixed angle with respect to  
4 said rod;

5  
6 at least one adjustable screw stop assembly attached to said gauge, said adjustable  
7 screw stop assembly provides fine adjustment of said gauge at a  
8 predetermined angle; and

9  
10 a pin to engage said adjustable screw stop at said predetermined angle.

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12 34. The miter gauge assembly of claim 33 wherein said gauge further comprises at  
13 least one downwardly depending gauge extension at a predetermined location on said  
14 gauge, said extension having an opening.

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16 35. The miter gauge assembly of claim 34 wherein said adjustable screw stop  
17 assembly further comprises a screw and a corresponding nut, said screw having a head  
18 end and a second end, said screw threaded through said nut and said opening in said  
19 downwardly depending gauge extension, said second end of said screw being in  
20 substantial alignment with said pin.

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22 36. The miter gauge assembly of claim 35 wherein said downwardly depending gauge  
23 extension is integrally formed as part of the gauge.

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25 37. A miter gauge assembly for use on a saw, said miter gauge assembly used to aid  
26 in the mitering of a workpiece by a saw blade of the saw, said miter gauge comprising:

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28 a gauge pivotally connected to a rod, said gauge having at least one downwardly  
29 depending extension;  
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a knob adjustment assembly to secure said gauge at a fixed angle with respect to said rod; and

means for fine adjusting said gauge at a predetermined angle.

38. The miter gauge assembly of claim 37 wherein said means for fine adjusting said gauge comprises a screw and a corresponding nut, said screw having a head end and a second end, said screw extending through said nut and said opening in said downwardly depending gauge extension, said second end of said screw being in substantial alignment with a slidably engageable pin.

39. A miter gauge assembly for use on a saw, said miter gauge assembly used for the mitering of a workpiece by a saw blade of the saw, said miter gauge assembly comprising:

a gauge pivotally connected to a rod;

means for securing said gauge at a fixed angle with respect to said rod; and

means for fine adjusting said gauge at a predetermined angle.

40. The miter gauge assembly of claim 39 wherein said means for securing said gauge at a fixed angle with respect to said rod further comprises a knob handle, said knob handle having a threaded end which mates with a threaded opening in said rod.

41. The miter gauge assembly of claim 39 wherein said gauge further comprises at least one downwardly depending gauge extension at a predetermined location on said gauge, said extension having an opening.

1 42. The miter gauge assembly of claim 41 wherein said means for fine adjusting said  
2 gauge at a predetermined angle comprises a screw and a corresponding nut, said screw  
3 having a head end and a second end, said screw extending through said nut and said  
4 opening in said downwardly depending gauge extension, said second end of said screw  
5 being in substantial alignment with a slidably engageable pin.

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7 43. A guard for partially covering a belt, said guard having a hinged joint for opening  
8 said guard to access said belt without the need for completely removing said guard.

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10 44. The guard of claim 43 further including an integrally molded latch for securing  
11 the guard in a closed position.

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